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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,945	12/28/2000	Turkka Keinonen	297-010033-US(PAR)	7516

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Clarence A. Green
Perman & Green
425 Post Road
Fairfield, CT 06430

EXAMINER	
CRENSHAW, MARVIN P	
ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,945

Applicant(s)

KEINONEN ET AL.

Examiner

Marvin P. Crenshaw

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment 2/11/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 and 15 -18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "candidate group" in claim 1-13 and 15 - 18 is not clear, which renders the claim indefinite. The term "candidate group" is not defined by the claim or specification and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19 - 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In the claim, How can the suggested "character" be "accepted"? When is the second comparison met since the second comparison compares to a string,

words and rules? What are the rules? And in the third comparison, how does a character get compared to context, structure and language? Appropriate correction is required.

Since the scope of claims 19 - 21 cannot be determined, prior art cannot be compared to these claims to evaluate whether or not they are patentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 13 and 15 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grover et al. in view of Yu et al.

Grover et al. teaches a keyboard arrangement (Fig. 1) including several keys (202) for inputting characters by pressing the keys (See Fig. 1, 202), the keyboard arrangement comprising: a processor (604) operable to perform a first comparison of the first candidate group of characters to a storage of words of a defined language and to accept one of the characters of the first candidate group of characters as a desired character if the first comparison is successful, wherein the processor is further operable to automatically perform a second comparison of a second candidate group of characters candidate to the set of stored words if the first comparison is unsuccessful, where the second character group includes a second character of the predetermined characters related to the pressed key.

However, Grover et al. doesn't teach a keyboard arrangement comprising means for detecting alternative sectional distributions of pressure on the at least one key as recited in claims 1, 4, 5, 7, 12 and 18, triangular shaped keys for a keyboard as recited in claim 6, the keyboard arrangement having the keys to form two rows are interlaced as recited in claim 8, the keys form a first row of keys and a second row of keys as recited in claim 9.

Yu et al. teaches a keyboard arrangement (Fig. 3) comprising, at least one key actuable in at least two different ways depending on a pressure distribution thereon, means for detecting alternative sectional distributions of pressure on the at least one key. Yu et al. teaches a keyboard arrangement (Fig. 3) having means for detecting alternative sectional distributions of pressure comprise at least two (B and T) pressure sensitive and or touch sensitive detectors attached to different locations of the key, a keyboard arrangement (Fig. 3) characterized that said means for detecting alternative sectional distributions of pressure comprise a movement sensitive detector attached to the key, a keyboard arrangement (Fig. 1) that has a key in triangular shape or has three arms, a keyboard arrangement having keys form two rows (Fig. 2) of keys and the keys of the two rows are interlaced, a keyboard arrangement (Fig. 2) characterized that the keys form a first row of keys and a second row of keys, the two rows of keys comprising three rows of characters marked on the keys, wherein the upmost row of characters is marked to the first row of keys, the middle row of characters is marked alternately to the first and the second row of keys and the lowest row of characters is marked to the second row of keys.

With respect to claim 1, 4, 5, 7, 12 and 18, it would be obvious to modify the keyboard arrangement of Grover et al. to have a keyboard arrangement comprising, means for detecting alternative sectional distributions of pressure on the at least one key as taught by Yu et al. to more efficiently arrange the different letters or alphabets used in the computer.

With respect to claim 6, it would be obvious to modify the keyboard arrangement of Grover et al. to have a keyboard arrangement having a triangular shaped keys for a keyboard as taught by Yu et al. to more efficiently arrange the different letters or alphabets used in the computer.

With respect to claim 8, it would be obvious to modify the keyboard arrangement of Grover et al. to have a keyboard arrangement having a keyboard arrangement having the keys to form two rows are interlaced as taught by Yu et al. to more efficiently arrange the different letters or alphabets used in the computer.

With respect to claim 9, it would be obvious to modify the keyboard arrangement of Grover et al. to have a keyboard arrangement having the keys form a first row of keys and a second row of keys as taught by Yu et al. to more efficiently arrange the different letters or alphabets used in the computer.

With respect to claim 2, Grover et al. teaches a keyboard (Fig. 1) arrangement wherein the first and second comparisons include performing linguistic disambiguation (See col. 4 lines 15-25).

With respect to claim 11, Grover et al. teaches a keyboard (Fig. 1) characterized in that it is a keyboard of a computer.

With respect to claim 15, Grover et al. teaches a method in accordance wherein comparing the character strings (See col. 4 lines 15-65) to the stored words comprises applying an algorithm based on comparison with known vocabulary, probability of successive characters, frequency of words in language, sentence structure, topic and/or paragraph text.

With respect to claims 3 and 16, a keyboard arrangement characterized in that it is substantially a QWERTY-keyboard, QWERTY-keyboard would be obvious because it is the standard type keyboard used for typing.

With respect to claim 10, having the keyboard as a keyboard for a mobile station would be obvious because all keyboards mobile to a certain degree.

With respect to claim 17, having a method wherein at least one key is pressed in one of at least two alternative ways on a mobile station would be obvious because it would be more efficiently arrange the different letters or alphabets on the mobile station.

With respect to claim 18, Grover et al. teaches a method wherein the key is on a computer (Fig. 1).

Response to Arguments

Applicant's arguments filed January 22, 2004 have been fully considered but they are not persuasive. Specifically, Grover et al. teaches a keyboard having a disambiguation means for processing the comparison of characters of a defined language. And Grover et al. apparatus teaches a means for comparison of a character to a storage of words once the word is entered.

Also, Applicant has not clearly defined over the 112 first paragraph rejection of claims 19 – 22. In the claim, How can the suggested "character" be "accepted"? When is the second comparison met since the second comparison compares to a string, words and rules? What are the rules? And in the third comparison how does a character get compared to a sentence context, syntax, structure and language?

With respect to applicant's arguments regarding the 112(2), the term "group" is indefinite. Applicant's meaning is incompatible to the ordinary definition. A "group" cannot only be one member.

With respect to applicant's argument about "the reference does not teach a comparison of a character to words", it does. The applied art of Grover et al. does teach a comparison of " at least one character candidate " to stored words because once a key is typed and selections of words are seen on the screen, that's when the comparison are done (See col. 11, lines 23 - 29). The operation of Grover et al. using the "select" key to delete words that will not be used is only after the comparison is done. There would not be a selection process unless there was a list of words compared to carry out the selection.

The comparison of character to words meets the limitation because in order for the words to be chosen to be seen on the screen, a comparison of characters would have been done so that a set of chosen words that fit the character range can be displayed.

Also, Yu et al. teaches a keyboard having at least two pressure sensitive detectors for detecting the contacts for the letter to be typed. This meets the

claimed invention since the letters are located at different locations on the keypad in order to detect which letter is being pressed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marvin P. Crenshaw whose telephone number is (571) 272-2158. The examiner can normally be reached on Monday - Thursday 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MPC
May 10, 2004



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800